

Memorandum

To : Deputy District Directors,
Project Development
and
Ken Badow, Central Design

Date : November 1, 1988

File No.:

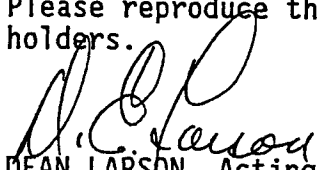
From : DEPARTMENT OF TRANSPORTATION
Division of Project Development - Office of Project Planning and Design

Subject: Design Bulletin No. 73 - Slab Replacements with Existing Edge Drains

We are transmitting Design Bulletin No. 73, Slab Replacements with Existing Edge Drains, to assist the designer. A proposed specification for slab replacements with existing edge drains has been submitted to Office of Office Engineer for publication.

This subject will be included in the next revision of the Highway Design Manual.

Please reproduce the Design Bulletin and distribute to all Design Manual holders.


DEAN LARSON, Acting Chief
Office of Project Planning
and Design

Attachment

KYM:jw

cc: All Coordinators and Geometricians
RDoty
G Wells
KKampe
KMori
OPPD File

DESIGN INFORMATION BULLETIN NO. 73

PORTLAND CEMENT CONCRETE PAVEMENT (PCCP)

SLAB REPLACEMENTS WITH EXISTING EDGE DRAINS

I. PURPOSE

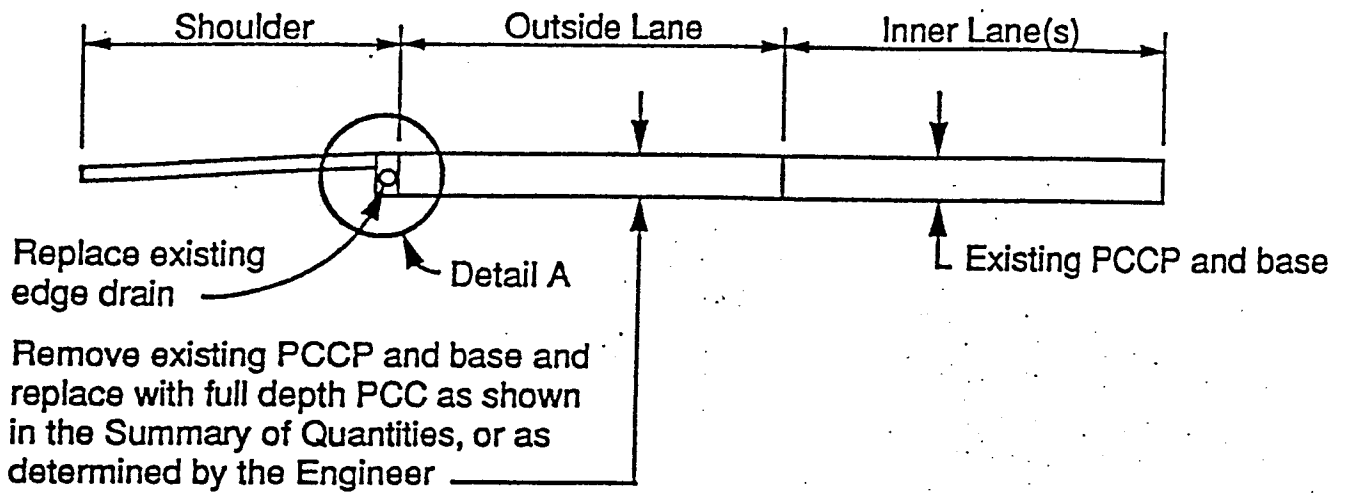
The objective of this design bulletin is to provide guidelines to designers for PCCP slab replacements with existing edge drains.

II. BACKGROUND

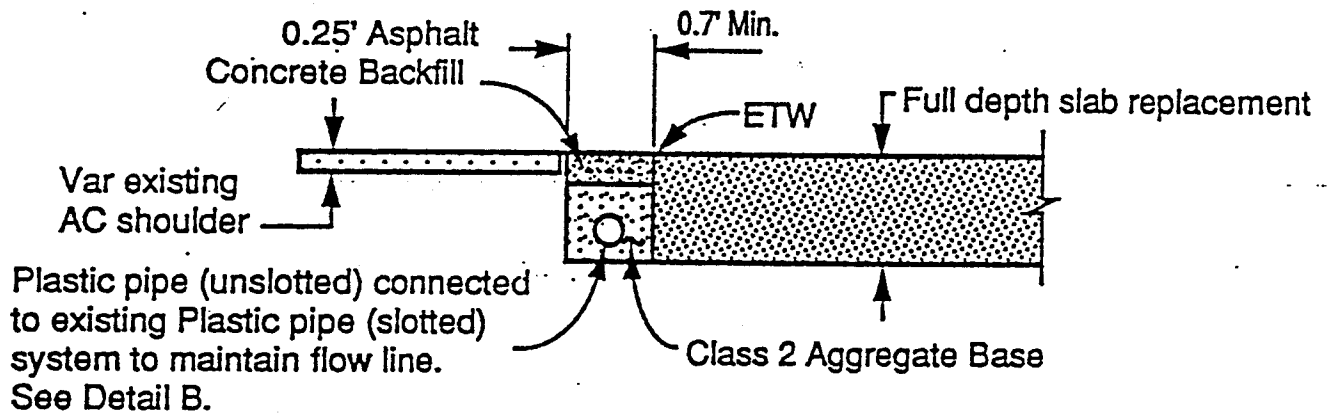
A problem is occurring with full depth PCCP slab replacement when side form(s) have to be placed where the existing edge drain is located in the shoulder. If the edge drain is replaced, the edge drain flow line will be too high to intercept water at the slab/subgrade interface. Water will flow to the bottom of the full depth slab, allowing pumping of the unbound subgrade material which may result in early slab distress and/or plugging of the edge drain. Each slab replacement location could require a new vent and outlet for the existing system and a new vent and outlet for the lower new edge drain, which is not recommended.

III. SLAB REPLACEMENT

Excavate and remove the treated permeable material (TPM) and edge drain, expose the edge drain approximately one foot past each end of the slab to be removed, place the side form(s) and place the full depth PCCP slab. Remove side form(s) after curing and place and compact commercial quality Class 2 aggregate base in the excavation for the side form(s) to the grade of the bottom of the existing edge drain stubs. Attach an unslotted PVC pipe to the existing slotted edge drains using band couplers. Place and compact additional commercial quality Class 2 aggregate base around and over the top of the unslotted PVC pipe to within 0.25' of the top of the new PCCP slab. Backfill the remainder of the excavation with 0.25' of dense graded AC. See attached sketch.



TYPICAL CROSS SECTION
NO SCALE



DETAIL A
NO SCALE

